

East Asian Species of the Genus *Chrysso* (Araneae: Theridiidae)

Hajime YOSHIDA¹⁾

吉田 哉¹⁾: 東アジア産のコガネヒメグモ属 (クモ目: ヒメグモ科)

Abstract Twelve species of the genus *Chrysso* of the family Theridiidae are recorded from East Asia. Two new species are described from Taiwan and Korea under the names, *Chrysso lativentris* sp. nov. (Korea and Taiwan) and *C. caudigera* sp. nov. (Taiwan). *Theridion rapulum* YAGINUMA, 1960 is transferred to *Chrysso*. *Chrysso pulcherrima* (MELLO-LEITÃO, 1917) is recorded for the first time from Japan, and *C. trimaculata* ZHU, ZHANG et XU, 1991 is newly recorded from Taiwan.

The spiders of the genus *Chrysso* are mainly distributed in warmer areas of the world. Up to the present, about ten species of this genus have been recorded in East Asia. In this paper, twelve species of the East Asian spiders of the genus are reported. Among them, two are described as new species from Taiwan and Korea. *Theridion rapulum* YAGINUMA, 1960, widespread from Hokkaido to the Ryukyus, Japan, and China, is transferred to this genus.

The genus *Chrysso* resembles the genera *Theridion* and *Achaeearanea*, but is easily distinguished from *Theridion* by having a hump or posterior dorsal extension on the abdomen, and from *Achaeearanea* by having a radix and free median apophysis in the male palpus and by the shape of the abdomen. The *Chrysso* spiders usually make irregular small webs under the leaf.

The holotypes of the new species described in this paper are deposited in the collection of the National Science Museum (Natural History), Tokyo (NSMT), and the paratypes are preserved in the Arachnological Society of Japan, Otomon Gakuin University, Osaka (ASJ), and in my private collection (HY).

Chrysso lativentris sp. nov.

(Figs. 1–5)

Female (holotype). Total length 5.00 mm. Carapace length 1.32 mm, width 1.16 mm. Abdomen length 3.58 mm, width 3.68 mm, height 3.37 mm. Measurements of legs as in Table 1.

Carapace suboval. Diameters of anterior median eyes smaller than the others (1: 2). Anterior median eyes five-sevenths their diameters apart and one and a half

1) 7–16, Kagota 2 Chome, Yamagata-shi, Yamagata, 990 Japan

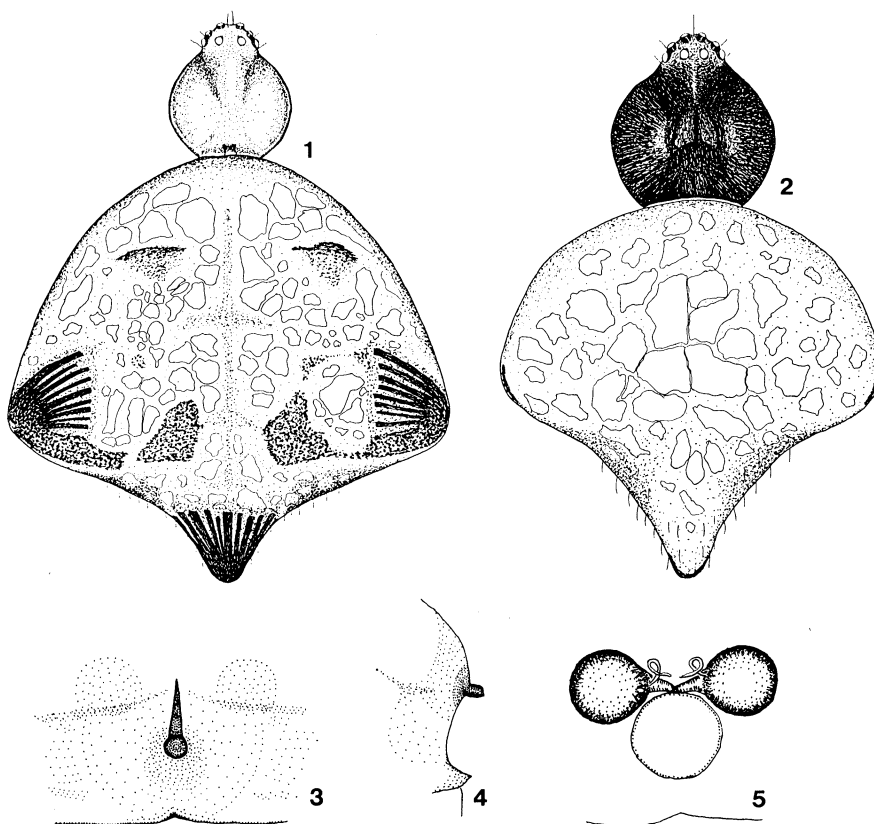
〒990 山形市竈田2丁目7番16号

Accepted May 7, 1993

Table 1. Lengths of legs of *Chrysso lativentris* sp. nov. (♀; in mm).

Leg	Femur	Patella+Tibia	Metatarsus	Tarsus	Total
I	2.53	2.58	2.00	0.95	8.06
II	1.68	1.53	1.16	0.68	5.05
III	1.33	0.95	0.68	0.47	3.43
IV	1.95	1.53	1.21	0.68	5.37

from laterals. Posterior median eyes three-fourths their diameter apart and one from laterals. Lateral eyes touching each other. Ratio of median ocular area, anterior width: posterior width: length=5: 5: 4. Leg formula 1, 4, 2, 3. Abdomen globular and wider than long, with a pair of lateral and a posterior extensions. Genital organ as shown in Figs. 3–5; epigynum with a median projection; seminal receptacles round; a large and round internal median plate present.



Figs. 1–5. *Chrysso lativentris* sp. nov.—1, Female, dorsal view (holotype); 2, female, dorsal view (Taiwan); 3, epigynum, ventral view; 4, epigynum, lateral view; 5, female genitalia, dorsal view.

Carapace yellowish brown, eye region and margin dusky. Chelicerae brown with longitudinal black lines. Maxillae and labium blackish brown, distally pale. Sternum black. Legs yellowish brown, distal part of patellae, tibiae and metatarsi with black rings. Abdomen yellowish brown with silver pigments, dorsum with black flecks as shown in Fig. 1, venter with a large black fleck between epigynum and spinnerets, both sides of epigynum with black flecks, upper part of the spinnerets with a black spot.

Male. Unknown.

Variation. Female total length: 3–5 mm. The Taiwanese specimen is small, and lacks dorsal black flecks on the abdomen (Fig. 2).

Type series. Holotype: ♀, Joreung, between Chungcheon-bug Do and Gyeonsang-bug Do, Korea, 1–VIII–1962, J. NAMKUNG, (NSMT–Ar 2958). Paratypes: 1♀, same data as for the holotype, (ASJ); 1♀, Mt. Sudosan, 1,000 m alt., Gyeonsang-bug Do, Korea, 14–VII–1971, K. YAMAGISHI, (HY); 1♀, Tsuifeng, 2,200 m alt., Nantow County, Taiwan, 23–VII–1977, H. YOSHIDA, (HY).

Remarks. This species resembles *C. venusta* (YAGINUMA, 1957), but is distinguished from the latter by the epigynum with a median projection and longitudinal opening. The abdomen of this species is wider than long, but that of *C. venusta* is longer than wide.

Etymology. The specific name is an adjective derived from the shape of the abdomen.

Chrysso caudigera sp. nov.

(Figs. 6–9)

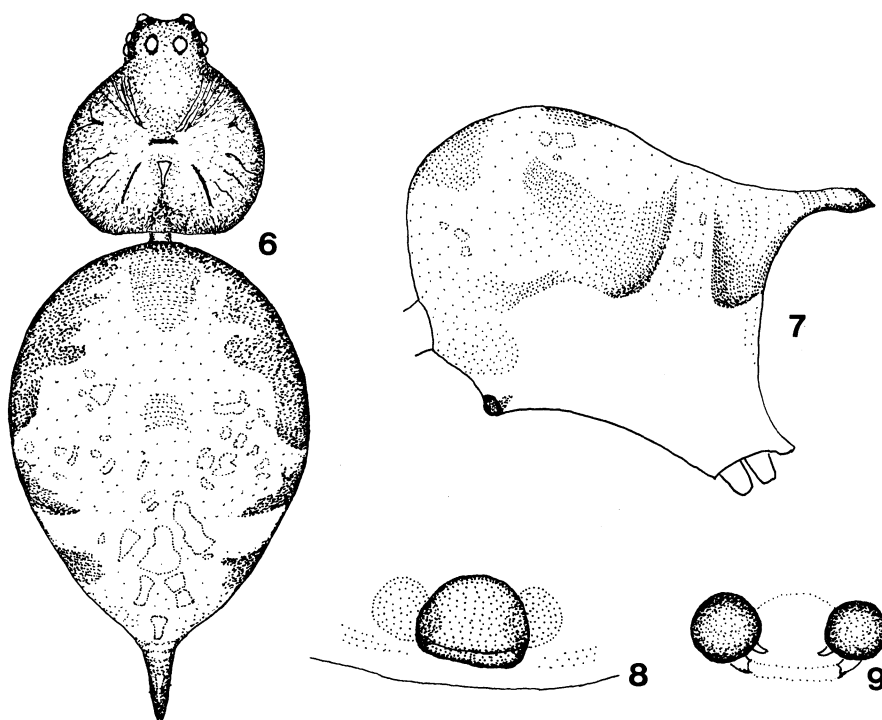
Female (holotype). Total length 3.67 mm. Carapace length 1.08 mm, width 0.92 mm. Abdomen length 2.18 mm, width 1.39 mm, height 1.97 mm. Measurements of legs as in Table 2.

Carapace suboval with a triangular thoracic depression. Diameters of posterior median eyes larger than the others (6: 5). Anterior median eyes twelve-fifths their diameters apart and four-fifths from laterals. Posterior median eyes their diameter apart and four-thirds from laterals. Lateral eyes touching each other. Ratio of median ocular area, anterior width: posterior width: length=10: 9: 6. Patellae with a distal spine, tibiae with two dorsal spines except the third tibia with one spine. Leg formula 1, 4, 2, 3. Abdomen suboval with a posterior extension as shown in Figs. 6–7. Genital organ as shown in Figs. 8–9.

Carapace, chelicerae, maxillae, labium and sternum black. Legs yellowish brown, coxae and trochanters with black flecks, fourth femora with two retrolateral

Table 2. Lengths of legs of *Chrysso caudigera* sp. nov. (♀; in mm).

Leg	Femur	Patella+Tibia	Metatarsus	Tarsus	Total
I	2.89	2.63	3.21	1.00	9.73
II	1.95	1.63	1.84	0.68	6.10
III	1.16	1.05	1.05	0.53	3.79
IV	2.47	1.74	1.74	0.63	6.58



Figs. 6-9. *Chrysso caudigera* sp. nov.—6, Female, dorsal view; 7, female abdomen, lateral view; 8, epigynum, ventral view; 9, female genitalia, dorsal view.

black spots. Dorsum of the abdomen almost black with white pigments and posterior light area, venter yellowish brown, epigynum brown.

Male. Unknown.

Type specimen. Holotype: ♀, Tsitow, Nantow County, Taiwan, 19-VII-1977, M. YOSHIMURA, (NSMT-Ar 2959).

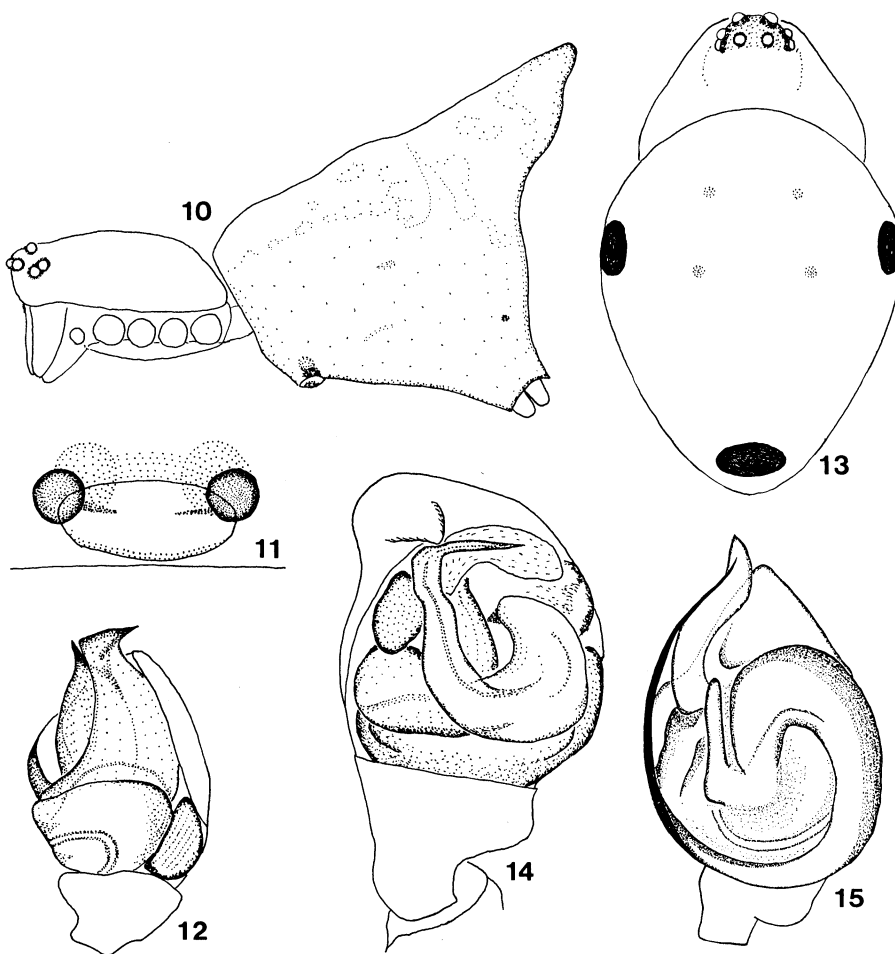
Remarks. This species resembles *Chrysso nigra* (O. PICKARD-CAMBRIDGE, 1880) known from Taiwan to Indonesia and Sri Lanka, but distinguished from the latter by the abdomen without lateral humps.

Etymology. The specific name is an adjective derived from the shape of the abdomen.

Chrysso pulcherrima (MELLO-LEITÃO, 1917)

(Figs. 10-12, 20)

New records. 1♂, Mt. Yuwandake, Amami-Oshima Island, Kagoshima Prefecture, Japan, 31-III-1978, H. YOSHIDA, (NSMT-Ar 2960); 2♀, 2 juv., Yoron Island, Kagoshima Prefecture, Japan, 2-III-1982, H. YOSHIDA; 1♀, Yoron Island, 3-VIII-1982, H. YOSHIDA, (NSMT-Ar 2961); 1♀, Hentona, Okinawa Island, Okinawa Prefecture, 6-VIII-1978, H. YOSHIDA; 1♀, 2♂, 4 juv., Chinen, Okinawa Island,



Figs. 10–15. 10–12. *Chrysso pulcherrima* (MELLO-LEITÃO, 1917).—10, Female, lateral view; 11, epigynum, ventral view; 12, male palpus, ventral view. 13–14. *C. trimaculata* ZHU, ZHANG et XU, 1991.—13, Male, dorsal view; 14, male palpus, ventral view. 15, *C. nigra* (O. PICKARD-CAMBRIDGE, 1880), male palpus, ventral view.

Okinawa Prefecture, 19–III–1979, H. YOSHIDA; 1♀, Iriomote Island, Okinawa Prefecture, 26–III–1985, A. TANIKAWA, (NSMT–Ar 2962).

Distribution. Japan, China, and widely distributed in tropical area of the Pacific, West Africa and America.

Chrysso trimaculata ZHU, ZHANG et XU, 1991

(Figs. 13–14)

New records. 1♂, 3 juv., Wulai, Taipei County, Taiwan, 4–VII–1977, M.

YOSHIMURA; 1♂, 1 juv., Wulai, 7-VII-1977, M. YOSHIMURA, (NSMT-Ar 2963).

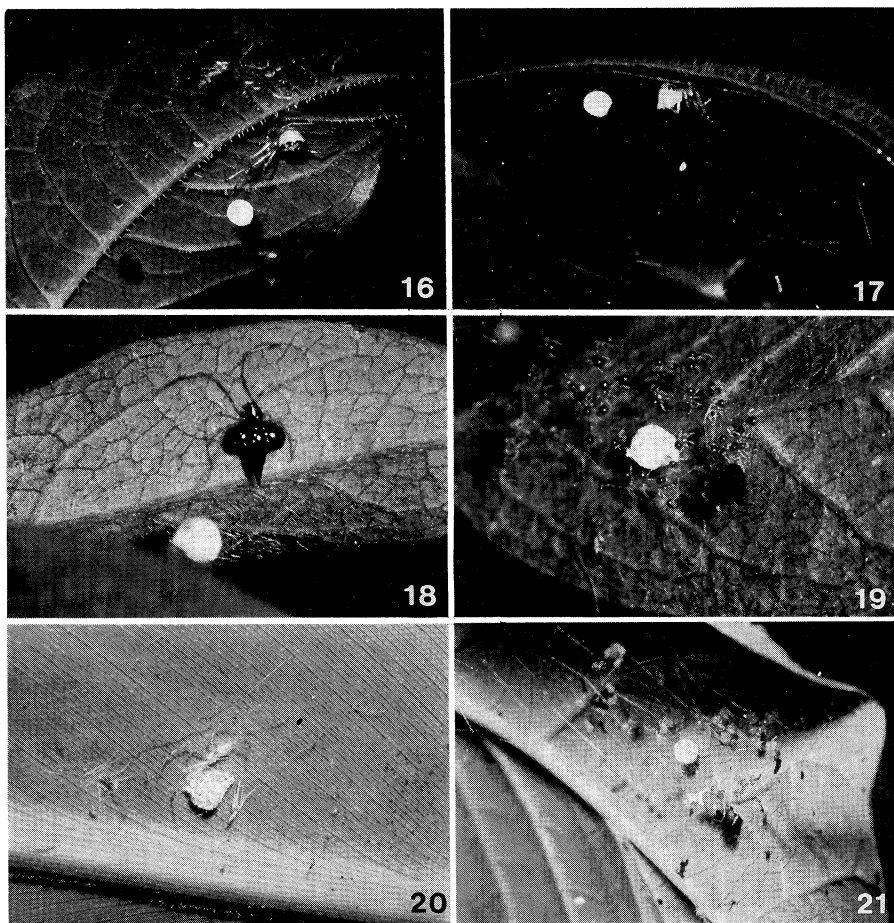
Distribution. Taiwan and China.

Chrysso rapulum (YAGINUMA, 1960), comb. nov.

(Fig. 21)

YAGINUMA (1960) described this species under the name of *Theridion rapulum*, but it should be transferred to the genus *Chrysso*. The abdomen with a posterior extension clearly shows that this species belongs to *Chrysso*. This species is similar to *C. trimaculata* ZHU, ZHANG et XU, 1991 in the shape of abdomen, but is distinguished from the latter by the genital organ.

Distribution. Japan, Korea and China.



Figs. 16-21. 16-17, *Chrysso venusta* (YAGINUMA, 1957); 18-19, *C. nigra* (O. PICKARD-CAMBRIDGE, 1880); 20, *C. pulcherrima* (MELLO-LEITÃO, 1917); 21, *C. rapulum* (YAGINUMA, 1960).—Females and eggsacs (19, 21 with juveniles).

***Chrysso nigra* (O. PICKARD-CAMBRIDGE, 1880)**

(Figs. 15, 18–19)

Theridula caudata SAITO, 1933 was synonymized with this species by YOSHIDA (1978).

Distribution. Taiwan, Indonesia, Malaysia and Sri Lanka.

***Chrysso argyrodiformis* (YAGINUMA, 1952)**

Distribution. Japan. Records from Taiwan are doubtful.

***Chrysso lingchuanensis* ZHU et ZHANG, 1992**

Distribution. China.

***Chrysso vesiculosa* (SIMON, 1894)**

Distribution. Japan, Taiwan, Philippine and Vietnam.

***Chrysso spiniventris* (O. PICKARD-CAMBRIDGE, 1869)**

Distribution. Japan, Taiwan, China, Indonesia and Sri Lanka.

***Chrysso punctifera* (YAGINUMA, 1960)**

Distribution. Japan, Taiwan and Korea.

***Chrysso venusta* (YAGINUMA, 1957)**

(Figs. 16–17)

Distribution. Japan, Taiwan, Korea and China.

Acknowledgement

I wish to express my hearty thanks to Dr. Takeo YAGINUMA, Osaka, for his continuous guidance and to Dr. Hirotugu ONO, National Science Museum, Tokyo, for critically reading the original manuscript. I am also indebted to Dr. Hozumi TANAKA, Osaka, Mr. Akio TANIKAWA, Kanagawa, and Mr. Mamoru YOSHIMURA, Osaka, for offering valuable specimens for the present study.

摘 要

ヒメグモ科 *Chrysso* コガネヒメグモ属に属する 12 種を東アジアから記録した。台湾および韓国産の 2 新種 *Chrysso lativentris* (韓国・台湾) ハラビロコガネヒメグモ (新称), *C. caudigera* (台湾) オナガヒメグモ (新称) を記載した。 *Theridion rapulum* YAGINUMA, 1960 ギボンヒメグモをコガネヒメグモ属に転属した。また, *C. pulcherrima*

(MELLO-LEITÃO, 1917) ミナミオダカグモ (新称) を日本から, *C. trimaculata* ZHU, ZHANG et XU, 1991 ミツボシヒメグモ (新称) を台湾からはじめて記録した。

References

- LEVI, H. W., 1962. More American spiders of the genus *Chrysso* (Araneae, Theridiidae). *Psyche*, **69**: 207-237.
- 1967. Cosmopolitan and pantropical species of theridiid spiders (Araneae: Theridiidae). *Pacif. Ins.*, **9**: 175-186.
- & L. R. LEVI, 1962. The genera of the spider family Theridiidae. *Bull. Mus. comp. Zool.*, **127**: 1-71, pls. 1-14.
- MELLO-LEITÃO, M. D., 1917. Espécies novas ou pouco conhecidas do Brasil. *Broteria, Lisboa*, **15**: 74-102.
- PICKARD-CAMBRIDGE, O., 1869. Part I of catalogue of a collection of Ceylon Araneidea lately received from Mr. J. NIETNER, with description of new species and characters of new genus. *J. Linn. Soc. Lond.*, **10**: 373-397, pls. 11-13.
- 1880. On some new and little-known spiders of the genus *Argyrodes*, SIMON. *Proc. zool. Soc. Lond.*, **1880**: 320-344, pls. 28-30.
- SAITO, S., 1933. Notes on the spiders from Formosa. *Trans. Sapporo nat. Hist. Soc.*, **13**: 32-61, pl. 3.
- SIMON, E., 1894. Histoire Naturelle des Araignées. II. Pp. 486-760. Paris.
- YAGINUMA, T., 1952. Two new species (*Phrurolithus* and *Ariamnes*) found in Japan. *Arachnol. News*, **1**: 13-16.
- 1957. Two new conopisthine spiders from Japan. *Acta arachnol.*, **15**: 11-16.
- 1960. Spiders of Japan in Colour. vi+186+8 pp. Hoikusha, Osaka. (In Japanese.)
- YOSHIDA, H., 1978. On some Formosan spiders (1). *Atypus*, (71): 21-28. (In Japanese.)
- ZHU, M.-S., W. S. ZHANG & Y.-J. XU, 1991. Notes of three new species and two new records of Theridiidae from China (Araneae: Theridiidae). *Acta zootaxon. Sin.*, **16**: 172-180. (In Chinese with English summary.)
- & Y.-Q. ZHANG, 1992. Notes of some species of Theridiidae in Guangxi (Arachnida: Araneae). *J. Guangxi Agr. Col.*, **11**: 20-29. (In Chinese with English summary.)